

Amendments to the Claims

This listing of claims will replace all prior versions, and listings of claims in the application.

1. (original) A combination of polynucleotides for amplification and detection of a portion of a *Salmonella phoP* gene, said portion being less than about 500 nucleotides in length and comprising at least 60 consecutive nucleotides of the sequence set forth in SEQ ID NO:30, said combination comprising:
 - (a) a first polynucleotide primer comprising at least 7 nucleotides of the sequence as set forth in SEQ ID NO:1;
 - (b) a second polynucleotide primer comprising at least 7 nucleotides of a sequence complementary to SEQ ID NO:1; and
 - (c) a polynucleotide probe comprising at least 7 consecutive nucleotides of the sequence as set forth in SEQ ID NO:30, or the complement thereof.
2. (original) The combination of polynucleotides according to claim 1, wherein said first and second polynucleotide primers comprise at least 7 nucleotides of the sequence as set forth in any one of SEQ ID NOS:16 to 22.
3. (currently amended) The combination of polynucleotides according to claim 1 ~~or 2~~, wherein said polynucleotide probe comprises at least 7 nucleotides of the sequence as set forth in any one of SEQ ID NOS:35, 37, 39 or 41.
4. (currently amended) The combination of polynucleotides according to claim 1 ~~any one of claims 1 to 3~~, wherein said first polynucleotide primer comprises at least 7 nucleotides of the sequence as set forth in SEQ ID NO:32 and said second polynucleotide primer comprises at least 7 nucleotides of the sequence as set forth in SEQ ID NO:33.

5. (original) The combination of polynucleotides according to claim 1, wherein said first polynucleotide primer comprises the sequence as set forth in SEQ ID NO:32, said second polynucleotide primer comprises the sequence as set forth in SEQ ID NO:33 and said polynucleotide probe comprises the sequence as set forth in SEQ ID NO:34 or 36.
6. (original) The combination of polynucleotides according to claim 1, wherein said first polynucleotide primer comprises the sequence as set forth in SEQ ID NO:32, said second polynucleotide primer comprises the sequence as set forth in SEQ ID NO:33 and said polynucleotide probe comprises the sequence as set forth in SEQ ID NO:38 or 40.
7. (original) A pair of polynucleotide primers for amplification of a portion of an *Salmonella phoP* gene, said portion being less than about 500 nucleotides in length and comprising at least 60 consecutive nucleotides of the sequence set forth in SEQ ID NO:30, said pair of polynucleotide primers comprising:
 - (a) a first polynucleotide primer comprising at least 7 nucleotides of the sequence as set forth in SEQ ID NO:1; and
 - (b) a second polynucleotide primer comprising at least 7 nucleotides of a sequence complementary to SEQ ID NO:1.
8. (original) The pair of polynucleotide primers according to claim 7, wherein said first and second polynucleotide primers comprise at least 7 nucleotides of the sequence as set forth in any one of SEQ ID NOs:16 to 22.
9. (currently amended) The pair of polynucleotide primers according to claim 7 or 8, wherein said first polynucleotide primer comprises at least 7 nucleotides of the sequence as set forth in SEQ ID NO:32 and said second polynucleotide primer comprises at least 7 nucleotides of the sequence as set forth in SEQ ID NO:33.

10. (original) The pair of polynucleotide primers according to claim 7, wherein said first polynucleotide primer comprises the sequence as set forth in SEQ ID NO:32 and said second polynucleotide primer comprises the sequence as set forth in SEQ ID NO:33.
11. (currently amended) A method of detecting one or more *Salmonella* species in a sample, said method comprising:
 - (a) contacting a test sample suspected of containing, or known to contain, a *Salmonella* target nucleotide sequence with the combination of polynucleotides according to claim 1 ~~any one of claims 1 to 6~~ under conditions that permit amplification and detection of said target sequence, and
 - (b) detecting any amplified target sequence, wherein detection of an amplified target sequence indicates the presence of one or more *Salmonella* species in the sample.
12. (original) The method according to claim 11, further comprising a step to enrich the microbial content of the test sample prior to step (a).
13. (original) A kit for the detection of one or more *Salmonelle* species in a sample, said kit comprising:
 - (a) a first polynucleotide primer comprising at least 7 nucleotides of the sequence as set forth in SEQ ID NO:1;
 - (b) a second polynucleotide primer comprising at least 7 nucleotides of a sequence complementary to SEQ ID NO:1; and

- (c) a polynucleotide probe comprising at least 7 consecutive nucleotides of the sequence as set forth in SEQ ID NO:30, or the complement thereof.
14. (original) The kit according to claim 13, wherein said first and second polynucleotide primers comprise at least 7 nucleotides of the sequence as set forth in any one of SEQ ID NOs:16 to 22.
15. (currently amended) The kit according to claim 13 ~~or 14~~, wherein said polynucleotide probe comprises at least 7 nucleotides of the sequence as set forth in any one of SEQ ID NOs:35, 37, 39 or 41.
16. (currently amended) The kit according to claim 13 ~~any one of claims 13, 14 or 15~~, wherein said first polynucleotide primer comprises at least 7 nucleotides of the sequence as set forth in SEQ ID NO:32 and said second polynucleotide primer comprises at least 7 nucleotides of the sequence as set forth in SEQ ID NO:33.
17. (original) The kit according to claim 13, wherein said first polynucleotide primer comprises the sequence as set forth in SEQ ID NO:32, said second polynucleotide primer comprises the sequence as set forth in SEQ ID NO:33 and said polynucleotide probe comprises the sequence as set forth in SEQ ID NO:34 or 36.
18. (original) The kit according to claim 13, wherein said first polynucleotide primer comprises the sequence as set forth in SEQ ID NO:32, said second polynucleotide primer comprises the sequence as set forth in SEQ ID NO:33 and said polynucleotide probe comprises the sequence as set forth in SEQ ID NO:38 or 40.
19. (original) An isolated *Salmonella* specific polynucleotide having the sequence as set forth in SEQ ID NO:30, or the complement thereof.

20. (original) A polynucleotide primer of between 7 and 100 nucleotides in length for the amplification of a portion of a *Salmonella phoP* gene, said polynucleotide comprising at least 7 consecutive nucleotides of the sequence as set forth in SEQ ID NO:30, or the complement thereof.
21. (original) The polynucleotide primer according to claim 20, wherein said polynucleotide comprises at least 7 consecutive nucleotides of the sequence as set forth in any one of SEQ ID NOS:32, 33, 35, 37, 39 or 41.
22. (currently amended) The polynucleotide primer according to claim 20 ~~or 21~~, wherein said polynucleotide comprises the sequence as set forth in SEQ ID NO:32 or SEQ ID NO:33.
23. (original) A polynucleotide probe of between 7 and 100 nucleotides in length for detection of *Salmonella*, said polynucleotide comprising at least 7 consecutive nucleotides of the sequence as set forth in SEQ ID NO:30, or the complement thereof.
24. (original) The polynucleotide probe according to claim 23, wherein said polynucleotide comprises at least 7 consecutive nucleotides of the sequence as set forth in any one of SEQ ID NOS:32, 33, 35, 37, 39 or 41.
25. (currently amended) The polynucleotide probe according to claim 23 ~~or 24~~, wherein said polynucleotide comprises the sequence as set forth in any one of SEQ ID NOS:35, 37, 41 or 43.
26. (currently amended) The polynucleotide probe according to claim 23 ~~or 24~~, wherein said polynucleotide comprises the sequence as set forth in any one of SEQ ID NOS:34, 36, 38 or 40.
27. (currently amended) The polynucleotide probe according to claim 23 ~~any one of claims 23 to 26~~, wherein said polynucleotide further comprises a fluorophore, a quencher, or a combination thereof.